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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,916	09/18/2006	Asim Kumar Sarkar	294-231 PCT/US	4536

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EXAMINER

REDDY, KARUNA P

ART UNIT	PAPER NUMBER
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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,916	Applicant(s) SARKAR, ASIM KUMAR	
	Examiner KARUNA P. REDDY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/29/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-24 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 15-24 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 6/29/2009 has been entered. Claim 9 is cancelled; claims 21-24 are added; and claims 10-14 are withdrawn from consideration as being drawn to non-elected invention. Accordingly, claims 1-8 and 10-24 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1796

Claim 21 recites "water-soluble container consists of a water-soluble azo-initiator." It is not clear if the water-soluble container is made of water-soluble azo-initiator or if water-soluble azo-initiator is contained inside the water-soluble container. Examiner interprets the claim as "water-soluble azo-initiator is contained inside the water-soluble container".

Claim Rejections - 35 USC § 103

5. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1) and Duffield et al (US 2003/0108705 A1).

The rejection is adequately set forth in paragraph 4 of office action mailed 4/9/2009 and incorporated here by reference.

6. Claims 1, 3-4, 6-8 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1), Duffield et al (US 2003/0108705 A1) and Uchiyama et al (JP 56048210 A).

The rejection is adequately set forth in paragraph 5 of office action mailed 4/9/2009 and incorporated here by reference.

7. Claims 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1), Duffield et al (US 2003/0108705 A1) and Dudzik et al (US 4, 444, 839).

Art Unit: 1796

The discussion with respect to McVay, Amo et al and Duffield et al in paragraph 5 above is incorporated here by reference. Furthermore, see example 1 of Amo et al, wherein 2,2-azobisamidinopropane dihydrochloride is the azo polymerization initiator.

McVay, Amo et al and Duffield et al are silent with respect to polyvinyl alcohol bag.

However, Dudzik et al teach that polyvinyl alcohol film is preferably prepared by extrusion blow molding (col. 2, lines 33-35). Therefore, it would have been obvious to one skilled in art at the time invention was made to prepare the water-soluble container by extrusion molding polyvinyl alcohol into a bag, because McVay in view of Amo contemplate using a package/container that is soluble in the resin formulation of reaction system, Duffield et al teach that water-soluble container can be prepared from polyvinyl alcohol, and extrusion molding polyvinyl alcohol into a bag, based on the teachings of Dudzik et al, would have been an obvious choice if a flexible bag made from film is desired as the water-soluble container.

8. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1), Duffield et al (US 2003/0108705 A1), Uchiyama et al (JP 56048210 A) and Dudzik et al (US 4, 444, 839).

The discussion with respect to McVay, Amo et al, Duffield et al and Uchiyama et al in paragraph 6 above is incorporated here by reference.

McVay, Amo et al, Duffield et al and Uchiyama et al are silent with respect to extruded container and bag.

However, Dudzik et al teach that polyvinyl alcohol film is preferably prepared by extrusion blow molding (col. 2, lines 33-35). Therefore, it would have been obvious to

Art Unit: 1796

one skilled in art at the time invention was made to prepare the water-soluble container by extrusion molding polyvinyl alcohol into a bag, because McVay in view of Amo and Uchiyana et al contemplate using a package/container that is soluble in the resin formulation of reaction system, Duffield et al teach that water-soluble container can be prepared from polyvinyl alcohol, and extrusion molding polyvinyl alcohol into a bag, based on the teachings of Dudzik et al, would have been an obvious choice if a flexible bag made from film is desired as the water-soluble container.

9. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of data for water-soluble azo-initiators (Wako Specialty Chemicals) and Duffield et al (US 2003/0108705 A1).

McVay et al disclose a package containing materials to be added to a resin formulation and comprises a thin-walled plastic envelope which is soluble in the resin formulation (abstract). After materials are placed inside the lined rigid container, the flaps are sealed to form an enclosed film package. The additive is intended to embrace any material which is added to a resin formulation and includes catalysts (column 1, lines 24-30). The additive package comprises an envelope made of a thin film of synthetic organic polymeric material which is soluble in at least one component of the resin formulation into which the additive is to be introduced. The resin formulation contains one or more components in which the thin film of organic polymeric material will dissolve i.e. one or more solvent components. The term "solvent component" is used in some of the claims to mean the component of the formulation which will dissolve the film (column 4, lines 18-30). McVay also contemplates an additive package which contains a plurality of additives. In cases where compatibility of additives is obtained only when

Art Unit: 1796

they are in dry state, care should be exercised to place dry additives in the envelope (column 7, lines 56-63).

McVay is silent with respect to azo-initiator in powder or crystal form; and water-soluble container/package.

However, data from Wako Specialty Chemicals shows that VA-044 (a commercially available water-soluble azo-initiator) exists in the form of crystals or crystalline powder. Therefore, it would have been obvious to use the commercially available azo-initiators in crystal or crystalline powder form, because McVay et al generically discloses that the additives, in dry state, can include catalysts and azo polymerization initiators (i.e. catalysts) are available commercially in crystal or crystalline powder form (i.e. dry) and one of ordinary skill would have expected successful results for all catalysts, including commercially available azo initiators from Wako Specialty chemicals, absent evidence of unexpected results.

With respect to water-soluble container, Duffield et al teach water-soluble containers made of an injection molded polymer, for example, a poly(vinyl alcohol) and/or cellulose ether (paragraph 0011-0012). Therefore, it would have been obvious to use a water-soluble container/package of Duffield et al, which is capable of being injection molded, because McVay in view of Specialty Chemicals contemplate using a package/container that is soluble in the resin formulation of reaction system and a known water-soluble container, that can be injection molded, would have been an obvious choice if the reaction is carried out in aqueous solution.

Response to Arguments

Art Unit: 1796

10. Applicant's arguments, filed 6/29/2009, with respect to rejection of claims 1-8 and 15-18 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement; and claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1), Duffield et al (US 2003/0108705 A1) and Uchiyama et al (JP 56048210 A), have been fully considered and are persuasive. The rejection of claims 1-8 and 15-18 under 35 U.S.C. 112, first paragraph; and claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1), Duffield et al (US 2003/0108705 A1) and Uchiyama et al (JP 56048210 A), as failing to comply with the written description requirement has been withdrawn.

11. Applicant's arguments filed 6/29/2009 have been fully considered but they are not persuasive. Specifically, applicant argues that (A) McVay '005 states that where one or more additives are solids which tend to dissolve or react with the film package, a vehicle may be used which will coat the reactive particle so that these will not attack or dissolve the envelope; (B) McVay '596 cited by the examiner in office action mailed 6/12/2008 describes azo-catalysts as sensitive catalysts that require the suspension in a liquid vehicle to stabilize the sensitive catalyst and reduce the explosion hazard, and thus teaches away from present claims; (C) Amo et al state that azo initiators have high thermal decomposition properties and explosive properties, and disclose the use of spherical granules of azo initiator to avoid dust. Hence, Amo et al teach away from storing the granules in a container; (D) Amo et al teach away from azo-compounds in the form of crystals and powders; and (E) Duffield et al is not combinable with McVay '005, Amo et al or Uchiyama et al.

Art Unit: 1796

With respect to (A), there is no teaching in McVay '005 that azo initiators dissolve or react with the film package and furthermore, applicant's attention is drawn to "a vehicle may be used" indicating that the vehicle is not required and may be used, if desired.

With respect to (B), applicant's arguments are not persuasive because rejections set forth in paragraphs 4 and 5 of office action mailed 4/9/2009 do not require the teachings of McVay '596 and stand on their own merits based on the teachings of McVay '005 in combination with secondary references other than McVay '596.

With respect to (C), Amo et al is used only for its teaching that azo initiators in the form of spherical granules can be used in view of safety. It is noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With respect to (D), applicant's attention is drawn to new grounds of rejection set forth in paragraph 10 above, necessitated by amendment.

With respect to (E), Duffield is only used for its teaching that polyvinyl alcohol can be used as a water-soluble container. Case law holds that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Conclusion

Art Unit: 1796

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. P. R./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796